

# DEPARTMENT OF ORNAMENTAL HORTICULTURE.

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SWITZERLAND, FLORIDA.

## THE BOTANY CLASS.

BY PROFESSOR W. N. GLUTE,  
in American Botanist.

### LESSON XVI.

There is a small shrub which grows very abundantly in the flatwoods and on damp soil generally near the coast in Florida and Georgia and westward. It flowers freely from April to December, the blossoms are from one to one and one-fourth inches in diameter, light yellow in color. We will take it for one subject of our lesson this week.

The petals are separate, so it belongs to division I Polypetalous plants.

Stamens and petals free from the calyx, hypogynous or nearly so? Yes.

Stamens more than twice as many as the petals? Yes.

Leaves opposite, entire? Yes.

Leaves dotted. Stamens separate. Stigmas small? Yes.

Order 18. Hypericaceae. (St. John's-wort family).

Herbs or shrubs, with opposite entire dotted leaves, without stipules, and regular hypogynous, mostly yellow flowers. Sepals 4-5, persistent. Petals 4-5, deciduous. Stamens mostly numerous, and often united at the base into 3-5 sets: Styles 2-5, often united, persistent. Capsule 1-celled, or 2-5-celled. Seeds very numerous minute.

### SYNOPSIS.

Petals convolute in the bud? Yes.  
I. Ascyrum. Sepals and (yellow) petals 4? Yes.

I. Ascyrum, L. St. Peter's-wort.  
Sepals 4, the two outer ones much larger (except No. 5). Petals 4, convolute in the bud, oblique. Stamens numerous. Styles 2-4, distinct or united. Capsules 2-4 valved. 1-celled.

Smooth shrubs with two-edged branches. Flowers mostly solitary, yellow.

Pedicels 2-bracted: Styles shorter than the ovary? No.

Pedicels bractless; styles longer than the ovary? Yes.

A. Amplexicaule. Leaves and outer sepals cordate-ovate, clasping, inner sepals lanceolate, as long as the outer ones; petals obovate; styles 3; capsule ovoid, barely half as long as the sepals. Damp soil near the coast, Florida, Georgia, and westward. Blooming season, April to December. Shrub 2-3 feet high. Branches many times forking.

In many places a shrub is found very commonly near this that looks almost exactly like it. But a close examination will show that the flowers each have 5 petals and 5 sepals. This is about all the difference there is between them, but the 4-petaled one is Ascyrum, or St. Peter's wort, while the 5-petaled one is a Hypericum, or St. John's wort.

We will also describe another flower in this lesson. It is an herbaceous plant with tall stems each bearing a spike of blue flowers at the top. It is quite common in this part of the state, growing in flatwoods land. The flowers have the petals united so we turn to:

Division II. Monopetalous plants.

Floral envelopes double, consisting of both calyx and corolla; the latter of more or less united petals.

Calyx free from the ovary? No.

Calyx more or less adherent to the ovary? Yes.

Anthers united? Yes.

Anthers contorted. Vines climbing by tendrils? No.

Anthers straight. Flowers in a raceme. Fruit a many-seeded capsule? Yes. Order 73. Lobeliaceae. (The Lobelia Family).

Chiefly herbs, with milky juice. Leaves alternate, without stipules.

Flowers irregular. Calyx 5-lobed, the tube adherent to the 2-celled ovary.

Corolla unequally 5-lobed, the tube split on one side to the base. Stamens 5, inserted on the calyx; the anthers, and commonly the filaments, united into a tube. Style solitary; stigma 2-lobed, surrounded with a ring of hairs. Fruit baccate and indehiscent, or capsular and 2-3-valved, many-seeded. Acrid poisonous plants.

I. Lobelia, L. Lobelia.

Corolla bilabiate, the upper lip small, erect or reflexed, 2-parted, the lower spreading, palmately 3-parted; the tube straight. Anthers, or a part of them, bearded at the apex, curved. Capsule 2-celled, 2-valved at the apex, many-seeded. Stems erect. Leaves undivided; the serratures glandular. Flowers blue, white, or scarlet, in terminal racemes or spikes.

Flowers scarlet? No.

Flowers blue and white? Yes.

Sinuses of the calyx with deflexed appendages? No.

Sinuses of the calyx without appendages? Yes.

7. L. glandulosa. Smooth or pubescent, stem mostly simple, nearly leafless above; leaves thick, linear or linear-lanceolate, glandular-denticulate, sessile, the uppermost scattered and bract-like, racemes 1-sided, 3-9 flowered, the flowers distant; calyx smooth or hirsute, with linear glandular lobes, corolla pale blue, 3-4 to 5-6 inch long.

Pine-barren swamps, Florida, North Carolina, and westward. Blooming season October. Perennial, stem 2-4 feet high. Lower leaves 2-4 inches long.

We should be very glad to hear from those in the class who have been able to identify the plants that we have described. There are two reasons for this, we would like to know that some of you are getting something of real value from these lessons, and also in what parts of the state these plants are found.

These lessons take a great deal of time to prepare and if they are not doing any good we should be glad to stop them.

Floriculture a Rapidly Developing Industry in Nebraska.

Under this title the Nebraska Farmer publishes an article describing the work of one man in that state. He seems to be rivaling Burbank, though in a much more limited field. Probably the Paeonies and Lilacs, which are his specialties, would not thrive in this state, but the account is interesting and may serve as an incentive to some one to take up the work of improving the plants that will do well here. For instance, the Crape Myrtle, (Lagerstroemia Indica) is only found in cultivation, in three colors, these

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might be crossed and, new shades produced, possibly a variegated form. The Ipomoeas present an almost endless field of cross-fertilization and improvement. The same is true of many other flowering plants that are grown in Florida. The article from the Nebraska Farmer is as follows:

Out at York, Neb., during the past two weeks there has been a display of floral beauty such as it is seldom one's privilege to see. I refer to Mr. C. S. Harrison's annual "Paeony Show."

The world has been hearing much of late of the work being done in California by Luther Burbank, that wizard into whose ear nature whispers her secrets, and to whom she has granted the precious charge of bestowing upon mankind more exquisite flowers and new and delicious fruits and berries, as though she feared that man's jaded appetite might need new beauty, new perfumes and new flavors upon which to feed.

Right here in our own midst is a man who is also doing unusual and splendid work in the improvement of plants and shrubs, producing new varieties and developing old ones into greater hardiness, longer season for blooming and increased beauty. Mr. Harrison's place is known as a state experiment sta-

tion, and his work with ornamental plants and shrubs benefits particularly the people who live in this section of the country. To improve and produce plants and shrubs fitted for this climate and add to the natural beauty and wealth of this state is the goal toward which he is striving.

Nebraska is notable for her corn and grain and her live stock, and nature has also been generous in giving us many flowers that grow and bloom here with abandon. The rose and some other rare flowers thrive better elsewhere, but these are those which do best here. Paeonies, especially, flourish nowhere else on earth with greater luxuriance than here in Nebraska soil. Those grown in England are famous, but they do not excel in any respect the paeonies grown in our state.

For definite purposes his flowers are grown in several separate gardens some distance apart, instead of all on one piece of land, which also prevents cross-fertilization between immature or unsuitable plants.

A glimpse into one of his large gardens of beloved Paeonies, about 50 feet wide and several times as long, is enough to dazzle the eyes. Wordsworth's graceful poem, "the Daffodils," describes a scene resembling this:

I wandered lonely as a cloud  
That floats on high o'er vales and hills,